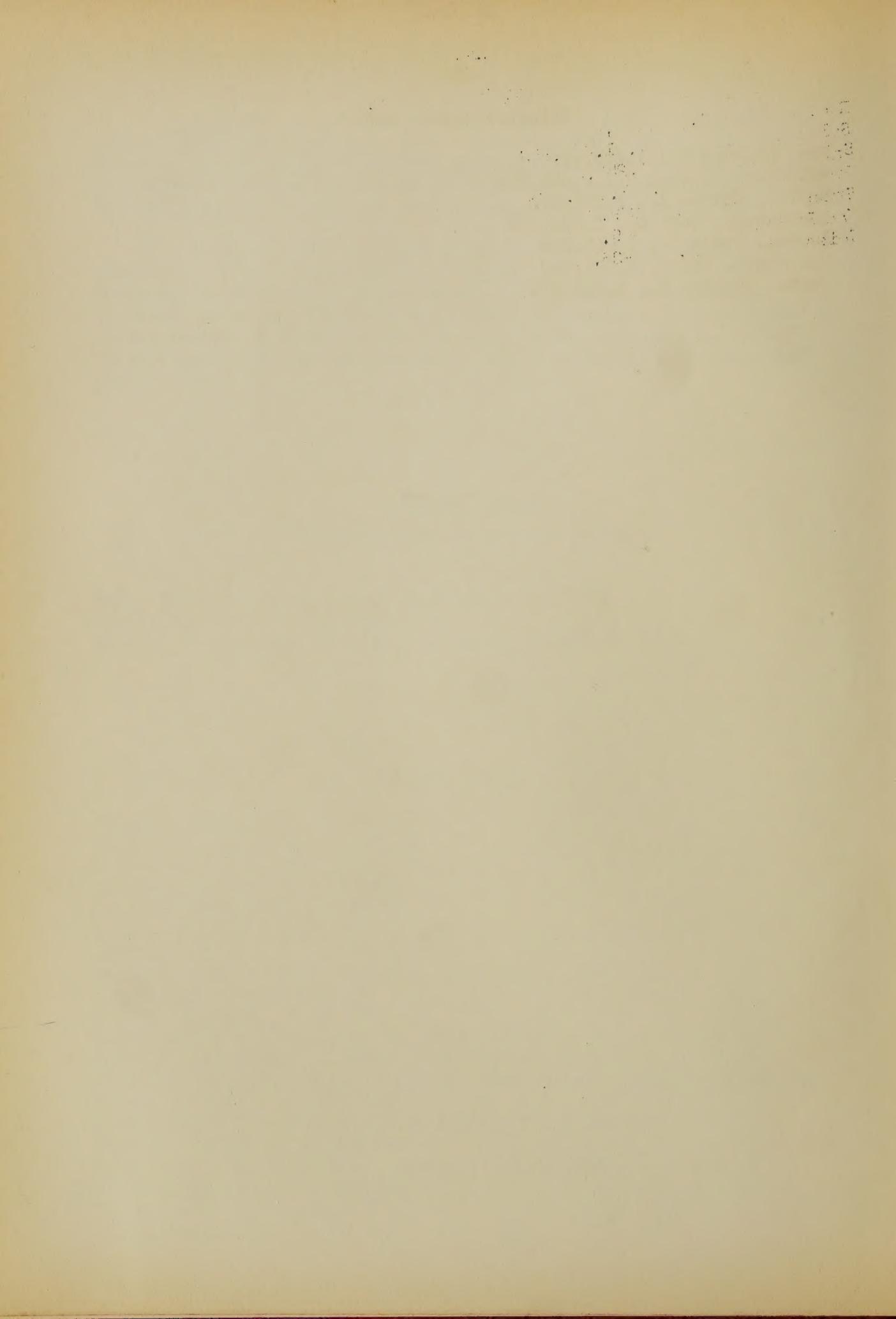


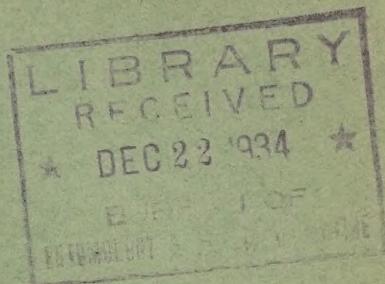
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UNITED STATES DEPARTMENT OF AGRICULTURE  
BUREAU OF ENTOMOLOGY AND PLANT QUARANTINE  
INSECTICIDE DIVISION

Patent List No. 29

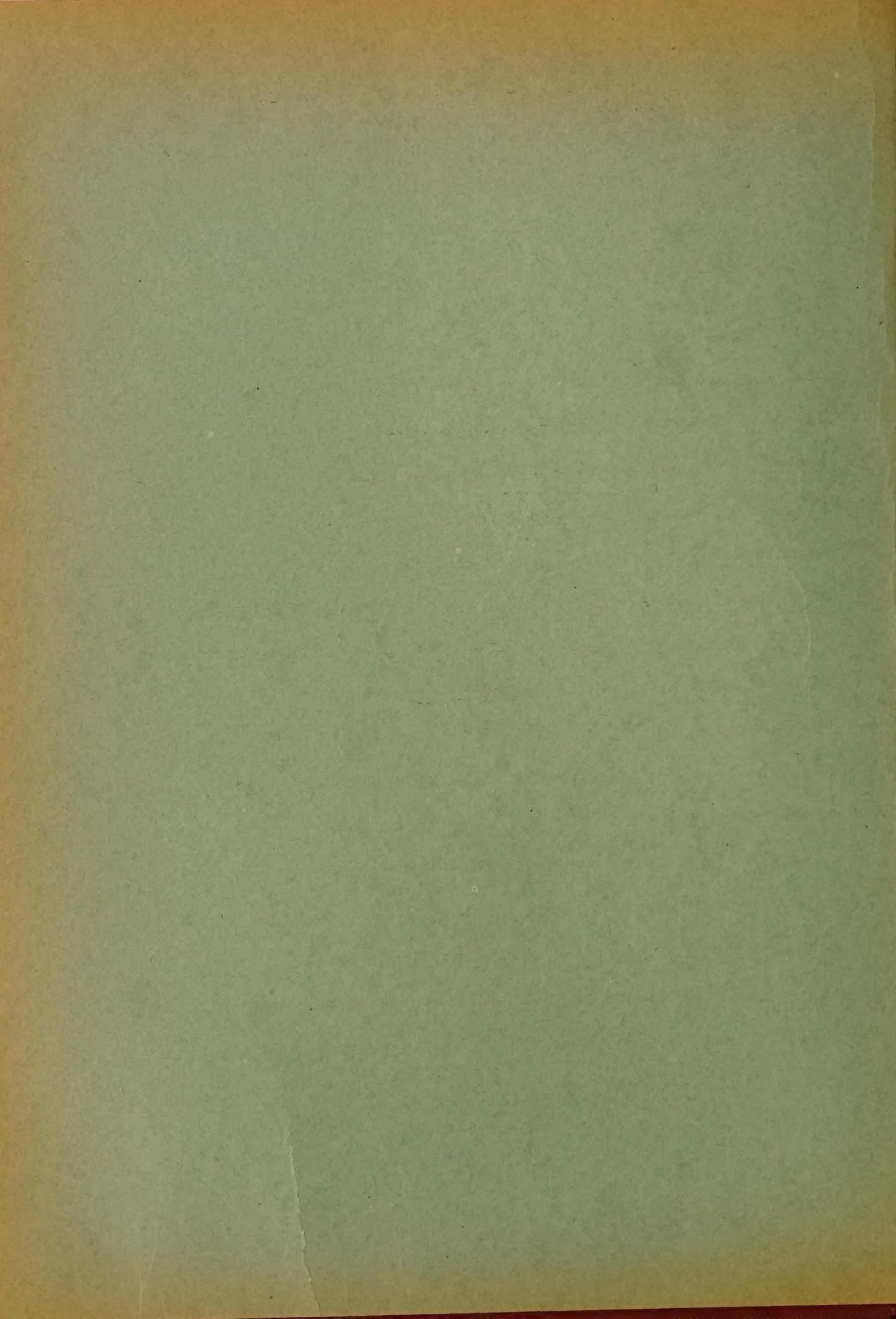


A LIST OF  
UNITED STATES PATENTS  
Issued from 1917 to 1933 inclusive  
relating to  
MISCELLANEOUS DEVICES FOR COMBATING INSECTS

Compiled by

R. C. Roark

Washington, D. C.  
November, 1934.



A LIST OF UNITED STATES PATENTS ISSUED FROM 1917 TO 1933, INCLUSIVE,  
RELATING TO MISCELLANEOUS DEVICES FOR COMBATING INSECTS

Compiled by

R. C. Roark

Insecticide Division, Bureau of Entomology and Plant Quarantine

These 55 patents describe miscellaneous types of apparatus for combating insects including traps for poultry lice, bedbugs, flies, Japanese beetles, mosquitoes, wild bees etc.; apparatus for killing insects in cotton seed, etc. by heat; mosquito netting for tents; fibre board impregnated with creosote, phenol, dinitronaphthalene, asphaltum, extract of celery or other chemicals to repel clothes moths, grain weevils, poultry parasites etc.; a machine for applying a mixture of coal oil, lard and crude oil to ant hills; a machine for shredding cotton stalks; an explosive cartridge for blowing insecticide upon a tree; screens for protecting lamps from flying insects; fly swatters mounted on doors; a device for attracting insects by radiating sound waves, etc.

Every effort has been made by the compiler to make this list of patents complete and no discrimination is intended against any patent mention of which is inadvertently omitted.

The Department of Agriculture assumes no responsibility for the merits or workableness of any of the patents, nor does it recommend any of the inventions listed.

1,216,356. (Feb. 20, 1917; appl. Aug. 18, 1916). PROTECTOR OF FABRICS AGAINST MOTHES AND THE LIKE, AND A METHOD OF MAKING THE SAME. Paul Pick, Chicago, Ill. - Fabrics and furs are protected against clothes moths by cardboard which has been dipped in a molten mixture of 9 parts by weight of dinitronaphthalene and 2 parts of phenol.

1,223,016 (Apr. 17, 1917; appl. Jan. 15, 1917). VERMIN-TRAP. Leland G. Young, Muscatine, Iowa. - This device consists of a strip of corrugated paper held between two strips of plain paper. It is attached to a poultry roost and provides a hiding place for vermin.

1,232,759. (July 10, 1917; appl. Nov. 13, 1916). PREVENTING RAVAGES OF WEEVILS. Thomas G. Blacklock, Brooklyn, N. Y., - Peter B. Olney, Jr., New York, N. Y. - Grain weevils are prevented from attacking food products by incorporating any part of the celery plant in the excelsior or other packing material or in the paper or cardboard containers for the food.

1,234,214 (July 24, 1917; appl. Sept. 8, 1916). INSECT-ERADICATOR. Mercer Reynolds, St. Elmo, Tenn. - Boll weevil eggs in cotton seed are treated with hot air, the humidity of which can be controlled.

1,238,360 (Aug. 28, 1917; appl. Sept. 11, 1916). TENT. Clark W. Surber, Chicago, Ill. - This tent is made proof against flies and mosquitoes by enclosing it in a housing of wire netting.

1,247,724 (Nov. 27, 1917; appl. July 31, 1916). INSECT-TRAP. Ernesto Sassenhoff, Elkhart, Ind., - Dr. Miles Chemical Co., Elkhart, Ind. - This knock down cylindrical flytrap may be constructed of light cardboard.

1,248,181 (Nov. 27, 1917; appl. Apr. 27, 1916). WALL-BOARD. Benjamin W. Sidwell, Jr., Buffalo, N. Y., - The Beaver Co., Buffalo, N. Y. - This wall board has one face impregnated with approximately equal parts creosote and asphaltum to which sufficient alkali has been added to combine with part of the phenol to form alkali phenolate. This material is used to line chicken houses, etc., and acts as a vermin repellent.

1,255,224 (Feb. 5, 1918; appl. Oct. 7, 1916). TENT FOR COTS AND THE LIKE. Isaac S. Purcell, Oak Park, Ill., - Tentbed Co., Chicago, Ill. - Flaps on this tent exclude the entrance of air currents and insects between the bed bottom and the tent walls.

1,261,842 (Apr. 9, 1918; appl. May 10, 1917). BUG-TRAP. Wilhelm Muller, New York, N. Y., - One-half to Curt H. Senf, Leonia, N. J. - This device comprises a pair of covering sheets of paper or cardboard and an interposed corrugated sheet. A bait consisting of a mixture of 8 parts by weight of animal blood, 2 parts of lard and 5 parts of water is applied to the center of the trap. This device is particularly intended for the extermination of bed bugs.

1,290,544 (Jan. 7, 1919; appl. June 7, 1918). ANT-KILLING MACHINE. Edward Graumann and John Graumann, Granite, Okla. - This apparatus consists of a tank and a hand pump and is intended for applying poisonous liquids or gases to the soil under air pressure. A successful mixture for use against ant hills is composed of 1 gallon pure coal oil, 1 pound of lard and 1/2 pound of crude oil.

1,297,335 (Mar. 18, 1919; appl. July 31, 1918). PROTECTOR FOR GAS MANTLES AND LAMPS. James A. Everett, McLouth, Kans. - This wire fabric cage surrounds a gas mantle to protect it from insects.

1,333,470 (Mar. 9, 1920; appl. Aug. 6, 1919). FLYTRAP. Patrick Curran, Chicago Heights, Ill. - Bait attracts flies to this collapsible paper trap.

1,369,242 (Feb. 22, 1921; appl. April 27, 1920). FLYTRAP. Carl P. Hasselgren, Superior, Wis. - This manually operable device comprises a plurality of alternating vertically adjustable cylindrical fly trap, said trap comprising a cylindrical transparent body portion, an inverted fly receiving cone for the upper end of the body portion, an apertured closure therefor, a similar fly receiving cone for the lower end of the body portion having no closure therefor, and adjustable means for cooperatively uniting the two cones and the body portion. When a number of flies have congregated beneath either one of the traps thus suspended, an observer may tap downwardly upon the end of the cross-beam which supports the trap under which the larger number of flies are seen, when said trap will be instantly depressed by gravity to surround the flies and will there remain, when the flies thereunder thus imprisoned will soon work their way up into the trap. Syrup or jelly may be used as bait.

1,371,318 (Mar. 15, 1921; appl. Oct. 1, 1918). BEE-TRAP. Lloyd E. McMonigal, McCartney, Pa. - This box-type trap with a conical wire screen entrance is designed for catching honey bees until it is desired to release them for use particularly in trailing wild bees to their hives.

1,373,827 (Apr. 5, 1921; appl. Sept. 25, 1920). COMBINED FENCE, PLANT-PROTECTOR, AND INSECT-DESTROYER. John Nelson and Robert Watson, Pasadena, Calif. - This metal barrier or fence is provided with a trough adapted to contain any suitable insect destroying powder such as Gold Dust washing powder. The device is especially designed for combating snails.

1,386,415 (Aug. 2, 1921; appl. Apr. 27, 1920). FLYTRAP. Ragnvald Leland, Birch Hills, Saskatchewan, Canada. - This flytrap comprises a flat plate on which a film of syrup or other fly-attracting material is placed and a slide which is drawn violently over the plate by a spring, sweeping the insects on the plate with it and compressing them against an end plate.

1,427,931 (Sept. 5, 1922; appl. Oct. 31, 1921). COTTON-STALK CUTTER AND INSECT KILLER. Thomas H. Batla and Henry J. Holan, Temple, Tex. - This machine is designed to be drawn through a cotton field to tear up and shred the stalks and kill all insects upon them.

1,439,874 (Dec. 26, 1922; appl. July 18, 1922). INSECT TRAP. Joseph P. Dillin, Ardmore, Pa. - This trap is characterized by two boards or plates hinged together so that one will rock relatively to the other and close a wedge shaped opening or openings between them, with resulting destruction of insects that have taken cover between the boards.

1,445,543 (Feb. 13, 1923; appl. Jan. 15, 1921). TRAP. Jens Nelson, New York, N. Y. - This trap consists of a wire mesh funnel placed in the top of a pail. Bait is used to attract flies, roaches, etc.

1,454,062 (May 8, 1923; appl. May 15, 1922). FLY SWATTER. Lewis B. McDaniel, La Belle, Mo. - This attachment for a screen door includes a pair of wings, normally disposed parallel to the door, when the door is closed, and so constructed that when the door is opened the flies will be caught between them and crushed.

1,463,875 (Aug. 7, 1923; appl. Mar. 24, 1922). SWATTER. William I. Croyle, Heilwood, Pa. - This swatter for flies, ants, etc., consists of a fixed upright swatting element and a movable swatting element which slides on a bar and is drawn into contact with the fixed swatter by a rubber band when a trigger is released. The surfaces of the swatter are coated with material attractive to insects. The dead insects fall into a trough provided for them below the fixed swatter.

1,464,397 (Aug. 7, 1923; appl. Oct. 3, 1922). ANTIVERMIN BED. Louis Royak, New York, N. Y. - The patentee claims in an antivermin bed, the combination with the bed legs of a superstructure carrying clamping means for the side portions of the bottom sheet, said superstructure having a continuous pocket adapted to receive vermin-repelling material (probably a paste of the proper composition), such pocket completely surrounding the end and side portions of the sheet and the tucked-in portions of the sheet. This is designed to prevent bedbugs from reaching the occupant of the bed.

1,473,538 (Nov. 6, 1923; appl. June 14, 1922). FLYTRAP. Reier A. Bakke, Redtop, Minn. - This device comprises two plates yieldingly spaced apart by loop form springs. The plates are coated with molasses or other sweet material or attractant for flies, and when flies have accumulated on the surfaces, the plates are brought together by a blow of the hand, crushing the flies.

1,494,032 (May 13, 1924; appl. Feb. 5, 1923). VERMIN-DESTROYING APPARATUS. Julius Stein, New York, N. Y. - A vermin destroying apparatus comprises a tray-like receptacle having a series of pans formed therein for holding poison bait; a liquid receptacle suspended from said tray-like member; and means for mounting the apparatus in service upon a spring mattress of a bed.

1,509,208 (Sept. 23, 1924; appl. June 6, 1922). PROCESS AND SYSTEM OF APPLYING INSECTICIDE. John C. Hull, Gasport, N. Y. - Insecticide in a water-proof container is blown upon a tree by a dynamite or other explosive cartridge ignited electrically.

1,510,610 (Oct. 7, 1924; appl. Mar. 11, 1922). STERILIZER. Parish H. Rylander, Austin, Tex. - The Rylander Co., Travis County, Tex. - This apparatus applies live steam at above 130° to cotton seeds to destroy pink boll worms.

1,569,624 (Jan. 12, 1926; appl. Mar. 11, 1925). POISONED-FOOD CORRAL. Peter Erickson, Ogema, Saskatchewan, Canada. - A woven wire fence surrounds a poisoned bait for gophers, mice, rabbits, etc.

1,584,589 (May 11, 1926; appl. Dec. 3, 1923). BERRY PROTECTOR AND PLANT MULCH. Charles A. Adams, Alpine, Tex. - This device for supporting strawberries to prevent them from rotting in the field also embodies insect trapping means. The device consists essentially of sheets of corrugated strawboard.

1,606,568 (Nov. 9, 1926; appl. Dec. 17, 1925). FLYTRAP AND BLANK THEREFOR. Ralph A. Gross, Lititz, Pa., - Lititz Paper Box & Printing Co., Lititz, Pa. - This box type flytrap is put together by folding and pasting a blank of cardboard. Molasses or other non-drying sticky substance admixed with quassia chips compound or other suitable poison is used to attract and kill the flies.

1,614,157 (Jan. 11, 1927; appl. Nov. 30, 1925). SANITARY BEDBUG TRAP. Leopold E. Schneider, Galena, Ill. - This device comprises a wooden block with means for fastening it to a bed frame, said block containing a cylindrical bore, closed at one end, in which poison bait can be placed and which bedbugs will enter in search of a hiding place. A wooden handle fitting into the bore may be pushed in to crush the bugs or the trap may be burned or plunged into boiling water or the bugs may be destroyed in any other suitable way.

1,670,523 (May 22, 1928; appl. Aug. 1, 1927). INSECTPROOF SCREEN FOR GASOLINE LAMPS. John W. Rucker, Coolidge, Kans. - This screen protects the mantle of a gasoline lamp against insects.

1,703,022 (Feb. 19, 1929; appl. Dec. 14, 1927). INSECT TRAP. William Weinrich, Honolulu, Territory of Hawaii. - Mosquito larvae that hatch in a solution contained in this trap are suffocated in their endeavors to reach the surface.

1,704,945 (Mar. 12, 1929; appl. Dec. 10, 1926). TENT-DOOR ARRANGEMENT. Charles B. Leffert, Chicago, Ill., - United States Tent & Awning Co., Chicago, Ill. - This insect proof tent door is an improvement over the one described in U. S. Patent 1,572,939 issued Feb. 16, 1926 to C. B. Leffert.

1,705,872 (Mar. 19, 1929; appl. Sept. 16, 1927). FLY SWATTER.

George A. Maharg, Moose Jaw, Saskatchewan, Canada. - This invention provides a swatter mounted on the entrance door of a building, and adapted to be actuated to kill or scare the flies congregated at the outer side of the door and arranged so that one can operate the swatter from either the inside or the outside of the door prior to opening the same.

1,732,849 (Oct. 22, 1929; appl. Feb. 2, 1929). INSECTICIDE DISTRIBUTOR. Johannes W. Letzerich, Lagrange, Tex. - This apparatus may be attached to a cultivator or other portable farming implement and shakes powdered insecticide from open weave fabric bags by striking them with a rocker bar.

1,772,989 (Aug. 12, 1930; appl. Nov. 9, 1929). INSECT TRAP.

William S. Emley, Philadelphia, Pa. - A Japanese beetle trap comprises a funnel, a receptacle into which the funnel discharges, a bait carrier supported from the funnel comprising a base including a foraminous bottom and a flange, a receptacle detachably engaged with said flange having openings adjacent the upper end thereof, and a protecting hood carried by said receptacle and extending over said opening.

1,773,099 (Aug. 19, 1930; appl. Dec. 26, 1929). PROCESS AND APPARATUS FOR THE DESTRUCTION OF INSECT LARVAE. Emery M. Dieffenbach, Orlando, Fla. - U. S. Government and People of the United States. - Insect larvae in orange or other fruit culls are destroyed by pulping the culls and maintaining the pulp in a vat for 3 days without access to the air. Chemicals such as calcium cyanamide may be mixed with the pulp or the pulp may be heated to hasten the destruction of the larvae.

1,783,631 (Dec. 2, 1930; appl. Feb. 25, 1930). INSECT TRAP.

Alexander C. Sladky, Milwaukee, Wis., - National Enameling and Stamping Co., Milwaukee, Wis. - A Japanese beetle trap includes a receptacle having a funnel-shaped member extending into the same, and transparent plates arranged at right angles to each other at the upper end of the funnel-shaped member which will be practically invisible to the insect; and adjacent the funnel-member is arranged a receptacle for material embodying an odor which will attract the insect so that the insects in being attracted by the odor will have a tendency to strike the transparent objects and become stunned, whereafter they will drop downwardly through the funnel-shaped member into the receptacle. Sawdust treated with oil of geranium may be used as bait.

1,784,243 (Dec. 9, 1930; appl. Apr. 11, 1929). SPRAYING DEVICE.

Lloyd A. Moffet, Fremont, Nebr. - Balls of insecticide are propelled by explosive from a tube held in the hand and the material scattered over the tree by an explosive in each ball.

1,786,599 (Dec. 30, 1930; appl. Apr. 1, 1930). BEETLE TRAP.

Edward S. Bullock, Lansdowne, Pa. - The trapping elements of this cone and baffle type trap are constructed of paper and can be packed flat for shipping. A pad impregnated with some odoriferous material attracts the insects.

1,787,421 (Dec. 30, 1930; appl. Apr. 2, 1929). BEETLE TRAP.

William A. Ruddell, Cape May Point, N. J., - Right Idea Jap-Beetle Trap Co., Norfolk, Va. - This cone and baffle type trap attracts Japanese beetles by means of an odoriferous bait and by its color.

1,833,095 (Nov. 24, 1931; appl. Sept. 6, 1930). WALL TENT.

Isidore P. Smith, Toledo, Ohio. - The Hettrick Mfg. Co., Toledo, Ohio. - Insects are kept out of this tent by a wall of net material such as bobbinet.

1,833,096 (Nov. 24, 1931; appl. Mar. 14, 1931). WALL TENT.

Isidore P. Smith, Toledo, Ohio. - The Hettrick Mfg. Co., Toledo, Ohio. - Flexible foraminous material such as bobbinet excludes insects from this tent.

1,850,763 (Mar. 22, 1932; appl. Oct. 21, 1930). MITE TRAP.

Clarence H. Morley, Patchogue, N. Y. - This mite trap may be mounted on a perch in a bird cage to trap the mites when they leave the bird.

1,855,985 (Apr. 26, 1932; appl. Sept. 30, 1931). INSECT TRAP.

Harvey S. Plummer, Fairview Village, Worcester Township, Montgomery County, Pa. - Odors blown into the air by an electric fan entice insects into this trap. The odorous material may be diluted geranium oil absorbed in sawdust if Japanese beetles are to be attracted.

1,856,809 (May 3, 1932; appl. July 1, 1931). RODENT AND VERMIN

POISON DEVICE. Ransom P. Gibson and Harry W. Woody, Beverly, Kans. - One-third to W. W. McCanles. - This device is for placing poisoned grain into the holes or runways of rodents. An attachment can be put on which makes the device suitable for dropping poisonous material into ant hills.

1,857,890 (May 10, 1932; appl. Mar. 12, 1931). INSECT TRAP.

Daniel J. Sullivan, Graniteville, Mass. - Mosquitoes are attracted by blood to this box-like cardboard trap and are caught on adhesive coated paper.

1,862,325 (June 7, 1932; appl. May 18, 1931). OUTDOOR SANITARY

EXTERMINATOR FOR HOUSE AND BLOW FLIES. Edward L. Watson, Rochester, N. Y. - Blowflies are attracted by fermenting animal or vegetable matter to this device and are killed by poison bait in an outer chamber.

1,864,431 (June 21, 1932; appl. Nov. 8, 1930). TRAP FOR CATCHING

WILD BEES. William A. Grover, Bristol, Vt. - This trap is in the form of an oblong wooden box with an ingress opening and a removable cover, whereby several bees may be caught at the same time without liberating any of the bees.

1,865,713 (July 5, 1932; appl. Oct. 23, 1929). INSECT TRAP.

Herbert K. Taylor, Elkins Park, Pa., - George D. Ellis and Sons, Philadelphia, Pa. - This cone-type Japanese beetle trap employs an odoriferous bait to attract the insects.

1,882,380 (Oct. 11, 1932; appl. Sept. 4, 1928; renewed May 11, 1932). BEETLE TRAP. Frederick A. Braun, Jenkintown, Pa. - Frank Sharp, Glenside, Pa. - This device comprises a receptacle containing lubricating oil or other suitable substance to kill beetles and a perforated conical entrance hopper surrounded by a casing containing waste saturated with oil of sassafras or other bait.

1,884,989 (Oct. 25, 1932; appl. Dec. 3, 1931). PROCESS FOR EXTRACTING ORGANISMS FROM ORGANIC OR INORGANIC SUBSTANCES. Foster H. Benjamin, Washington, D. C. - U. S. Government and People of the United States. - Fruit or vegetables are freed of insects by placing the infested material in a wire screen cylinder and immersing in a 2 percent solution of formaldehyde.

1,900,199 (Mar. 7, 1933; appl. Nov. 10, 1930). INSECT TRAP. Angelo C. Pickett, Riverside, Calif. - This trap, which employs suitable bait to attract flies, is constructed of inexpensive and readily destructible material so that after use for a short time the trap with its contents of flies, germs and filth can be destroyed by burning or other suitable means.

1,915,583 (June 27, 1933; appl. Nov. 22, 1927; in Sweden Nov. 27, 1926). APPARATUS FOR SPREADING FLY-KILLING LIQUIDS ON A CARRIER. Oskar Svensson, Daglossen, Sweden. - A band of material with fine transverse corrugations is kept wetted with a fly killing liquid (e. g. pyrethrum extract in lubricating oil or petroleum distillate) by means of a wick from a reservoir.

1,919,916 (July 25, 1933; appl. Oct. 28, 1927). INSECT TRAP. Herbert K. Taylor, Elkins Park, Pa. - George D. Ellis and Sons, Philadelphia, Pa. - This cone-type Japanese beetle trap employs a bait or attractant such as that described in patent No. 1,572,568 granted Feb. 9, 1926.

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